

Application No.: 09/676,680
Amendment Dated: March 8, 2004
Reply to Office Action of: December 8, 2003

MAT-8021US

Remarks/Arguments:

Claims 12-19 have been withdrawn, as being drawn toward non-elected species.

Rejections Under 35 USC §112

Claims 1-11 have been rejected under 35 USC §112, first paragraph, as failing to comply with the enablement requirement. Claims 2-6 have been further rejected under 35 USC §112, second paragraph, as being indefinite. It is respectfully submitted that claims 1-11, as amended, are no longer subject to this rejection.

Rejections Under 35 USC §102(e)

Claims 1-11 have been rejected under 35 USC §102(e) as being anticipated by Matsugu et al. (US 6,463,176). It is respectfully submitted that claims 1-11, as amended, are patentable over Matsugu et al. for the reasons set forth below.

Matsugu et al. disclose a recognition processing method in Figure 1B. This method, which includes dividing an input image into local feature elements, S12, matching local feature-element patterns to a template that has been previously stored, S15, and extracting an array from the input image which corresponds to data in the template, S16, is described in column 5, lines 9-42 of the specification. The Examiner has cited a recognition step that is included in S15 of Matsugu et al., described in column 8, lines 6-18, as corresponding to counting and judging steps.

In this step Matsugu et al. disclose that a target may be recognized at a certain position by summing the absolute differences between a set of target cell values and a subset of cell values for local feature elements in an image, where the subset is offset within the image. If this sum is below a predetermined minimum value (or above a

predetermined maximum value), then it is determined that the target has been recognized at a position represented by the offset.

The present invention, as recited in amended claim 1, contains a feature which is neither disclosed, nor suggested by the Matsugu et al., namely:

...counting pairs formed of one of the local-segments and the related learning-local-segment having an estimated position for the object substantially equal to a first position to determine a score for the first position;... (Emphasis Added)

Independent claims 2 and 11 include this same feature and independent apparatus claims 7-9 include counting means, which perform the function recited in this feature of claims 1, 2, and 11. Thus, in the present invention, as recited in claims 1-11, pairs of local-segments from an image and learning-local-segments from a learning image are pre-matched and the position of a potential object in the learning image represented by these pairings are calculated. Those pairs representing substantially equal potential object positions are then counted. The judging step then identifies that the object in the learning image is actually at a given position if the number of these pairs counted exceeds a predetermined number.

This feature, which is described in the specification at page 13, lines 12-18, is distinguished from the recognition step of Matsugu et al. Matsugu et al. do not disclose or suggest pre-matching pairs of local-segments from an image with learning-local-segments from a learning image and estimating the position of a potential object in the learning image represented by this pairing, as recited in the counting step of claim 1.

Therefore, for the reasons set forth above, independent claims 1, 2, 7-9, and 11, as amended, are not subject to rejection under 35 USC §102(e) as being

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anticipated by Matsugu et al. As claims 3 and 5, as amended, are dependent on claim 1, claims 4 and 6, as amended, are dependent on claim 2, and claims 10, as amended, is dependent on claim 8, these claims are not subject to this rejection as well.

In view of the amendments and arguments set forth above, the above-identified application is in condition for allowance, which action is respectfully requested.

Respectfully submitted,

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March 8, 2004

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